

Iowa Power Fund Board - Due Diligence Committee (DDC)
Meeting Minutes
December 15, 2008

Iowa Department of Economic Development, Conference Room
Des Moines, IA

Call to Order

Roya Stanley, Chair, called the meeting to order at 1:05pm.

Roll Call

Member	Present	Absent
Tom Barton	Conf. Call	
Franklin Codel	X	
Ted Crosbie		X
Vern Gebhart		X
Patricia Higby	X	
Fred Hubbell	X	
William (Curt) Hunter	Conf. Call	
Roya Stanley	X	

Also in attendance from the OEI, Governor's office, Iowa Power Fund Board: Brian Crowe and Mary Lewis.

Approval of Agenda

Ms. Stanley asked for a motion to approve the agenda. Mr. Barton motioned to approve; Mr. Hubbell seconded the motion. The motion passed unanimously.

Approval of Minutes

Ms. Stanley asked for a motion to accept the October 22nd minutes. Mr. Hunter motioned to approve; Mr. Barton seconded the motion. The motion passed unanimously.

Chair's Remarks

None

Full-Application Review

08-08-1145 Consumers Energy, Plug-In Electric Hybrid Electric Vehicle (PHEV) – Brian Heithoff, CEO

- Founded in 1938 as Marshall County Electric Cooperative
- 5000 member owners in Central Iowa
- This PHEV would be the first of its kind in Iowa
- This vehicle will be an educational piece designed to measure energy usage and performance.
- Would be one of the first 7 rural electric cooperatives to test this technology in the United States. There appears to be about 150 vehicles operating in the US.
- Benefits include: 3-4 times less gasoline consumption than traditional autos
- Using standard coal for electricity generation there GHG reductions is anywhere from 50-70% from a standard gasoline vehicle.
- Google has tested some PHEV. The Toyota Prius achieved 93.5 MPG vs. Toyota Prius Hybrid that averaged 43.4 MPG.

- A kit was purchased plug-in kit through Hi-Motion in Minneapolis, MN.
- Existing battery was replaced with a lithium-ion battery which has 5 hour charge life.
- Consumers Energy would like assistance with monitoring PHEV with "V2Green" software. All of the information would be on a website for the general public to observe the live-up to minute data recovery on vehicle performance. Consumers Energy will also develop a video for education.
- Cost share would be estimated at \$81, 205, for an investment of \$19,000 from the Power Fund.
- There have been some studies in Minnesota and Wisconsin but nothing in Iowa.

Q. How will Consumer's Energy use the information derived from the Fund?

A. Consumers Energy expects that this will be able to define cost effectiveness of integrating the PHEV into their fleet.

Q. Consumer's Energy is one of seven that is testing PHEV, will there be a final report?

A. Yes, there will be a final report in addition to an interim-report that has already been completed. Currently Touchstone has PHEV's being tested in Oregon, North Dakota, Ohio, Kentucky, South Carolina, and one other state.

Q. Does Toyota support this technology?

A. No, it voids their factory warranty.

Q. So there is no way for an individual to integrate the technology without voiding a warranty?

A. Correct.

Q. What would Consumer's Energy share with other REC's in Iowa?

A. They would share everything with other REC's in Iowa.

Q. Have the other Co-Ops that are testing PHEV using testing software?

A. All other testers are using except for Iowa.

- A stronger proposal might include a marketing piece (Higby)

Vote:

Yes – Higby, Hubbell - commit that annually that Consumer's Energy will report on performance and dollars to public and REC's in the State of Iowa., **Hunter**

Table –

No – Barton, Codel

Proposal has been approved to go to the Iowa Power Fund Board with caveats as mentioned by Mr. Hubbell.

08-08-1142 Iowa State University, Increasing the Use of Distillers Grains in Livestock Diets - Dan Loy, Professor of Animal Science

- Previous proposal dealt with the mountain of DDGs that were sitting idle due to a massive amount produced by Iowa's ethanol industry.
- The economics of the project are different now, but even more important because of the issues surrounding a struggling ethanol industry.
- The applicant's proposal was previously tabled, and now has come back to the committee, at the committee's request with a prioritization of studies.
- The first priority is a beef experiment which would vastly increase the use of DDGS
- The second is a poultry experiment which if found to be inclusionary would have great immediate impact.
- The third is a swine experiment that would look at fractionation to test the value of fractionation in the process. This experiment could have a vast long-term impact for Iowa.
- The fourth is another beef study with preventative measures for sulfur-induced (PEM)
- The fifth and sixth are swine experiments that can have long term impacts on the feeding industry.

Q. There have been several Power Fund proposals that have dealt with DDGs and animal feeding? How has the Board prioritized feed testing?
 A. There are some other pre-applications which the Board has reviewed.
 Q. How does the Board determine the importance of the research, outside of the University context? Can ISU collaborate with industry for more cost share?
 A. Most industry want specifically focused studies that are associated with private industry.
 Q. Is ISU the only contributor to this project?
 A. Right now yes, but the applicant is in discussion with Farm Bureau and some other companies.
 Q. How many ethanol plants in Iowa have fractionation process?
 A. One.
 Q. Wouldn't that limit the effectiveness of the study?
 A. The value would be to the swine producers, who would know the caloric value of the feeding.
 Q. With the swine studies, how would the Board be promoting the goal of energy independence?
 A. The value would go to the ethanol industry. Through the value of the commodity, the value would go to the swine industry, to expand demand, which would help the ethanol industry.
 Q. Could the proposers explain the lack of funding from the producers?
 A. From the beef industry, the law limits studies to beef products.
 Q. Is that the limit of funding for the beef industry?
 A. Farm Bureau is also interested and has funding pending.

Vote:

Yes- Codel – without the fractionation issue, **Hubbell, Barton, Higby, Hunter (for studies 1 & 2)**

No-

Table- (studies 3-6) - and that applicant brings back to the committee an assessment of all projects on DDGs (comparison of the various proposals w/ Novecta, revised proposal).

Proposal has been approved for studies 1 and 2 to go to the Iowa Power Fund Board with caveats.

Review of Pre-application

08-11-1157 Lake Delhi Renew Project

Reviewed by Barton

Project would refurbish a Lake Delhi a dam that was decommissioned in 1973. The applicant claims that most of the electric generating equipment is in place. The request is large and is lacking information.

- Information about where the electricity would go, and who would buy it would be useful.
- An electrical utility involvement would be beneficial.
- The application is lacking details that would be necessary for the DDC to make an informed decision.
- More data would be helpful in a variety of areas.
- Iowa has a small percentage of hydro, and the DDC would like to see the proposal come back with more detail.
- The licensing situation/information around the dam would be useful
- Additional cost share or seeking additional cost share from USDA or other sources would be beneficial.

Vote:

Yes -

Yes, if -

No, but - Codel, Hubbell, Higby, Hunter

No - Barton

08-11-1158 Distillers Grains Research Proposal

Reviewed by Codel

This project comes from Novecta which has previously been funded by the Iowa Power Fund Board. This project will focus on DDGs from a specific plant in Iowa. Power Fund is requested to fund just less than half of the proposal. It would be beneficial for staff to review how this proposal is similar to other feed studies being reviewed by the Power Fund Board.

- Novecta says that they will do quality studies on three plants, will the plants that are not part of the study adopt the quality standards. It is not guaranteed that all the plants will adopt the studies recommendations.
- Novecta would need to provide the three specific site locations to the DDC in the full application so the committee can see if there is an adequate dispersal of ethanol plant technology that is represented in Iowa.
- DDC would not want Novecta to start this study until the quality management system is in place from their current quality studies. Want to make sure they know what they've learned in their first study.
- This proposal may need to be split into two proposals. Applicant should be very specific about both of the proposed studies in this proposal.
- There needs to be more collaboration with Regents and USDA about other studies in this area.
- Would want to request a formula for replication on the quality process.

Vote:

Yes -

Yes, if- Codel – if they understand the breakout of the two pieces, **Higby, Hubbell** – Novecta needs to touch base with scientists from ISU, **Hunter, Barton**

No, but -

No -

08-11-1159 Glycerin and cellulosic sugars to single cell oil

Reviewed by Hunter

Recusal- Barton

Project would use ISU patented yeast that would convert its mass from glycerol into oil. If the economics of the proposal work, this could be a very viable project. The match is from Iowa State and the Renewable Energy Group. The proposal would use two bioreactors to develop oil to use in the biodiesel process. This product would be non-competitive would food stock. The project has 4 or 5 stages. One stage would focus on growing of the yeast, optimize the oil extraction, and develop biodiesel. The proposal would test the quality of the biodiesel to determine benefit.

- There is a question about the allocation of staff time on the proposal.
- The efficiency seems to be very exciting.
- There is a pilot plant for this technology. There is thinking that this should be more quickly commercialized than three years.
- Pilot is 25 gallon; this pilot would be 10,000 gallon.
- The payback is 2-3 years on a 60 million gallon biodiesel plant.
- Iowa State may have a position on the IP extraction process.
- There is another biodiesel technology project coming from Ames that the DDC should compare the two technologies.
- There should be more cost share for this project as it's an exciting technology.
- More information should be including on IP in a full application.

Vote:

Yes - Codel

Yes, If - Hubbell, Higby, Hunter – More detail on IP and expectation of private investors.

No, but -
No -

08-11-1160 O'Halloran International

Reviewed by Higby

This project comes from O'Halloran International is a resubmit. This project will focus on utility trucks in Iowa to demonstrate the efficacy of the technology.

- This proposal may not make a significant difference in Iowa.
- There are none in commercial use in Iowa.
- This proposal points out how difficult it is to get technology on big ticket items.
- It is hard to get over cost hurdles of energy efficiency products.
- The pre-application was very well put together.

Vote:

Yes -
Yes, if -
No, but -

No - Barton, Codel, Higby, Hubbell, Hunter

08-11-1161 Iowa Lakes Electric Cooperative

Reviewed by Hubbell

This project comes from a rural electric utility which would involve putting several wind turbines on two ethanol plants to support the electricity needs of the ethanol plant. This project would be more akin to distributed generation. The challenge with this proposal is that non-profits do not get tax credit from the federal government; the applicant is also waiting on some federal law changes, which have yet to be completed. There are some contingencies on the bond issuing items, and there is really not a clear use of funds delineated in the pre-application.

- Seems like the ILEC cannot sell or use the bonds.
- It would be better for ILEC to come back once legislation is approved and they have sold the bonds.
- Community wind is important for Iowa, but the Power Fund really wasn't set up to support community wind projects.
- The DDC would be interested to see what they would like the entity to use Power Fund dollars.
- The project would need to be further down the road, before the DDC would seriously consider.
- There should also be an evaluation from the applicant about federal resources that may be available through USDA Rural Development.

Vote:

Yes -
Yes, if -
No, but - Hubbell

No - Barton, Codel, Higby, Hunter

08-11-1162 Iowa Wind and Solar

Reviewed by Barton

This project comes from a new company that plans to sell and install commercial solar panels, wind turbines, and biomass furnaces. The company's main offices are in Fairfield. There is not much said about what the applicant would do with the money from the fund. The fund would be

used to purchase equipment, but there is not a lot of information about what the application would be used.

- Funds would mostly go towards the purchase of heavy equipment and tools.
- A strong argument within proposal but applicant is trying to start a small business.
- The applicant should talk to the Small Business Administration

Vote:

Yes -

Yes, if -

No, but -

No - Barton, Codel, Higby, Hubbell, Hunter

08-11-1163 Iowa Alliance for Wind Innovation

Reviewed by Hubbell

Recusal - Hunter

This project was a previous applicant to the fund. There is not a lot of information about what has changed from the previous application. This project comes as a consortium of Iowa Regents, community colleges, and state government. There are no similar collaborations for wind anywhere in the country, but there are in other industries across the country. In the previous proposal the applicant did not break out the funding, this proposal outlines a more defined budget, but it does not define specific projects.

- The project has several R&D and education aspects, both which are supported by the Fund.
- R&D projects would be identified and refined by IAWIND which would then propose to the Power Fund Board for approval.
- The project would also expand current educational projects and develop new projects to increase education throughout the state.
- The Department of Economic Development has been involved in the project.
- This project could be defined as strategic positioning for the state.
- There will also likely be more federal funding for R&D for the wind industry, this could like position the state to receive more federal dollars.
- The DDC could ask for more detail about the match, and where match might be available where the applicant has not discussed match, particularly from the federal government.
- There may also be substantial resources available from the federal government for workforce training, that this project could leverage, that the applicant should think about in a full application.
- There are many areas that need research in the wind industry, but there is no definition of what research would be necessary.
- There is no definition of the companies that might be involved.
- There is no definition of what testing facilities that would be needed.
- This is an important area for the state, and there is a big opportunity here from the state. At the full application discussion Tom Wind and Mike Tramontina should be in attendance.
- DED has money as well, why does it need to be Power Fund.
- \$500,000 of the proposal would go to education, and \$500,000 of the proposal will go towards coordinating the Regents. The Regents should consider funding aspects of the project as well.

Vote:

Yes -

Yes, if - Barton, Codel, Higby – with the understanding that I don't want to vote when a full proposal comes to committee, **Hubbell** – important industry but strongly suggest that Tom Wind, Michael Tramontina, or his deputy, be in attendance during the full application review to

understand their positions and why they can't allocate their own funds. The Regents should also explain why they need funding.

No, but -

No -

08-11-1164 Solid Catalyst Technology in a Biodiesel Plant

Reviewed by Codel

Recusal - Barton

This project has identified a catalyst which will be beneficial in the development of biodiesel. The Power Fund is being asked to fund roughly 40% of the project. The company is looking to develop a pilot scale. The technology is incredible and the manufacturer has been involved with many large companies in the US and Europe. The process would convert fats and oils into biodiesel. The catalyst is a recyclable technology that is currently being tested at a pilot facility at the Beacon Facility at ISU.

- This catalyst would apply to the various feedstocks currently being used by the biodiesel industry in Iowa.
- Success would be determined by catalyst deployment to biodiesel facilities all over the world.
- MDV is a venture capital company that has put in \$5 million, and the \$2.1 million match would come out of the \$5 million.
- The return would go to Iowa State and MDV (which owns 40% in the company)
- The company should define how flexible they would be to sharing in success with the Power Fund.

Vote:

Yes - Codel, Higby

Yes, if – Hubbell – 1) need to get responses regarding how applicant feels about sharing their success and 2) need OEI recommendation before going to the full Power Fund Board, **Hunter**

No, but -

No -

There should be some coordination between several biodiesel feedstock proposals that are in front of the DDC.

08-11-1165 Iowa Biodiesel Board- Education Program

Reviewed by Higby

This project is from the Iowa Biodiesel Board to education mechanics at all of the community colleges across the state. The project would seek to educate mechanics statewide about the benefits and potential stumbling blocks associated with the use of biodiesel.

- The proposal should consider including auto-sales people in the biodiesel discussion. The project is needed, but there may be the need to go a bit further.
- There is not a lot of detail in the proposal; a full application would need much more detail.
- The industry is relatively new, and education is needed.
- Budget needs to be much clearer.
- What will the Power Fund Board money be used for specifically?
- How will the IBB reach the mechanics? Why would the mechanics listen? Will companies allow mechanics to leave work for training?

Vote:

Yes -

Yes, if - Barton, Codel, Higby – would like to see proposal expand past the mechanics, **Hunter** - define what the Power Fund money will help develop within the project

No, but - Hubbell

No -

Other Business

Ms. Stanley reminded the committee that the next Due Diligence Committee meeting would be February 25, 2009 and that they would be informed as to the next meeting's time and location.

Adjournment

Meeting adjourned 5:00pm.

Respectfully Submitted,

Brian Crowe, Recorder